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ABSTRACT

The improvement of college students' reading rate and comprehension is a major educational concern. Many students arrive at college unprepared for the massive amount of required reading. This study presents several attempts to improve vocabulary, reading rate, and comprehension and addresses tangential issues related to the improvement of reading at the college level. Students were asked to indicate the number of credit hours taken, hours worked outside of school, and number of children in the home. These were used as co-variates to examine their influence on reading rate, comprehension, and vocabulary. The results are examined within an information processing context. (RS)

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Introduction and Purpose

College instructors are increasing encountering students who are unprepared for the rigors of academic life. Some students are unable to cope with the large amount of reading that is required in certain disciplines. Others have difficulty with the vocabulary terms. While there is much discussion about these issues, little of substance has been done to directly remediate or deal with these issues. The authors have endeavored to both examine this difficulty, and attempt to remediate it via a number of different strategies.

The Higher Education Act (HEA) recognizes the need for better trained and skilled teachers and is holding the Teacher Education programs accountable for the quality of the teaching profession. (Lewis, 1998). Yet, at the same time, college instructors are increasingly encountering students who are unprepared for the rigors of academic life. There is some concern about higher education since in a recent survey conducted by Rose and Gallup (1998) only 18 % of the respondents rate the nation's public schools favorably.

This paper discusses an effort to remediate reading comprehension, and reading rate and vocabulary utilizing assignments specifically using Bloom's taxonomy of Educational Objectives and taking into account student responsibilities.

In the first experiment, four classes were given the Nelson Denny Reading Rate/Comprehension and Vocabulary Test at the beginning of the semester. One class was required to do assignments in terms of outlining each chapter employing guidelines and directives employing the lower levels of Bloom's taxonomy.

This class was asked to define all new vocabulary words and terms and to describe the most important information. Further, they were required to explain new concepts, terms, ideas and comment on their relevance. They were also asked to indicate how this would apply to their particular subject area for example, math, science, music, art etc.

The second class had to do the same assignments using the three higher levels of Bloom's taxonomy. At the higher levels, students were asked to classify the most important information and compare the various approaches in the chapter. They were asked to distinguish between the main points. They could combine the most important points and link them to relevant material in their subject area. They were also asked to appraise and evaluate the material.

A third class was asked to outline each chapter and were free to employ whatever schemata they desired. A fourth class was assigned weekly homework from a traditional "study guide "that came with the text, but they were also asked to perform outside reading relevant to each chapter. These materials were selected from the professional literature and were related to each chapter.

In addition, some supplementary information was procured that was thought to be relevant. The number of classes a student was taking, the number of hours working outside of school (either part time or full time jobs) and the number of children that the student was responsible for was also requested. . It was thought that these outside duties and responsibilities may have a significant bearing on student success.

The Nelson Denny was then given as a post test (the alternate form) and a multiple regression analysis was conducted to ascertain what variables best predicted student success.

Royer, Abranovic and Sinatra (1987) have indicated that entering reading comprehension performance is a good valid predictor of performance in college classes. They did indicate however, that there are specific and general comprehension abilities. In other words, science students have subject specific skills that geography students may not have. This may be related to interests, past knowledge and major and minor fields of interest. In addition, college students often have a number of outside responsibilities such as children, part time and full time employment, and other classes which may interfere with optimal functioning. This aspect was also explored as part of this study.

Results

The means and standard deviations of the four involved groups in the first experiment are indicated below.

Reading Rate

Group 1- Pre-	252.9	86.9	n=19	Group 1- Post-	222.2	62.8	n=19
Group 2- Pre-	243.5	55.5	n=22	Group 2- Post-	215.9	52.0	n=20
Group 3- Pre-	248.5	73.9	n=22	Group 3- Post-	246.0	68.4	n=20
Group 4- Pre-	267.1	83.0	n=39	Group 4- Post-	246.4	81.8	n=37

As can be seen there was no significant increase in reading rate from the pre to the post test. In fact, there was a decrease in some instances. This was attributed to a fatigue factor at the end of the semester. In addition, there were small sample sizes and some groups lost a few students due to attrition.

Reading Comprehension

Group 1- Pre-	54.4	12.6	Group 1- Post	57.2	8.0
Group 2- Pre-	51.2	14.5	Group 2- Post	51.1	12.0
Group 3- Pre-	51.0	11.0	Group 3- Post	53.9	10.0
Group 4- Pre-	58.2	11.5	Group 4- Post	57.8	11.3

While there were some slight increases in reading comprehension , these were not statistically significant. Again, at the end of the semester when the post test was

given, may students indicated that they were tired, overwhelmed and attempting to prepare for final exams and complete term papers and other assignments.

Vocabulary

Group 1- Pre-	53.4	11.4	Group 1- Post-	57.1	10.7
Group 2- Pre-	49.7	12.7	Group 2- Post-	55.2	12.5
Group 3- Pre-	56.9	9.5	Group 3- Post-	59.2	7.1
Group 4- Pre-	58.5	11.7	Group 4- Post-	59.2	11.2

Again, while some of the groups showed a slight increase, these were not statistically significant. The passage of time could account for these increases. Informal feedback from students indicated that they were often overwhelmed, suffering from stress and that they had too much to do and too little time. In terms of implications for faculty, it may be that students simply need to take fewer hours of coursework.

In addition, given the fact that many students take other courses, their time is divided among three or four or even five courses. Thus, the prompting to use Bloom's taxonomy or to use study guides may be ineffectual. Student approach to assignments may also be simply routine at best. Some of the investigators felt that students did not "stick "to the outlining routine in terms of using Bloom's taxonomy. Students may need to be re-directed to the task at hand and even continually re-trained to use Bloom's taxonomy. Other students seemed to be "clueless "and simply seemed to be outlining as they have in the past without any regard for the directions to use Bloom's taxonomy. Further, in the current television, video and MTV culture, students may simply not enjoy reading or spend adequate amounts of time reading. They may read before the examination or read summaries or simply request "review sheets "to prepare for examinations.

In the second experiment, some different processing tactics were attempted. In one group, the lower levels of Bloom's taxonomy were employed as students were required to outline each chapter according to these guidelines.

In the second group, the three higher levels of Bloom's taxonomy were employed , in the third group, all six levels of Bloom's taxonomy were used to focus both on application as well as synthesis and evaluation, and in the fourth group, weekly tests on vocabulary words were given as well as weekly quizzes over the material.

The weekly tests and weekly quizzes attempted to employ a hypermnesia effect. This effect has been seen to causes students to study, learn and retain the information and there is a wealth of literature supporting this procedure. In general, it has been found that repeated testing does enhance learning. Glover (1989) has found that this " testing " effect may hold students accountable and responsible for learning. On the other hand, there is a loss of direct instructional time with these repeated tests, and some students report feeling somewhat alienated and pressured.

One problems with the weekly vocabulary quizzes was that students appeared to lack the motivation to study vocabulary words because no extra points were assigned in class. If students had received points or some type of reinforcement, perhaps they would have been more motivated to study vocabulary. It was clear to the instructor of that section that students had not studied the text vocabulary.

In general, students are often not motivated to do additional work. Some students enroll in courses, review the requirements and syllabi and then make decisions to withdraw from the class or decide on how much effort and work they will put into

a course. As some students are involved in sports and extra-curricular activities, this is understandable. In fact, this was one of the purposes of this investigation, to ascertain some of the extraneous variables that are operative during a college semester.

Sadly, no clear conclusions can be drawn from the procured data. College students may simply cope with classes in ways that have been seen to be effective in the past.

The results are as follows :

Reading Rate

Group 1- Pre- 252.9	86.9 n=20	Group 1-Post- 222.2	62.8 n=19
Group 2- Pre- 243.5	55.5 n=23	Group 2-Post- 215.9	52.0 n=21
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A SAS general linear models procedure revealed an F value of 2.11 with the dependent variable of Vocabulary and this was significant at the .05 level of confidence. A tukeys Studentized Range revealed that group 4 performed significantly better than group 2. However, group 4 did not outperform the other groups.

Implications and Recommendations

In attempting to enhance reading rate, reading comprehension and vocabulary, there are time and labor costs. The results of these two experiments reflect a basic inability to increase reading rate and reading comprehension significantly using the lower and higher levels of Blooms' taxonomy. One positive outcome was that vocabulary skills can be increased by the use of weekly tests. In some classes it may be important to use weekly quizzes to enhance vocabulary growth and there may be some generalization to vocabulary skills in general. However, we do not know of the effect on student morale.

Being forced to continually process information, submit papers and the like may have a negative effect on students. If other instructors are lax or lenient, students may harbor ill feelings toward instructors that require additional work. This issue remains to be explored in future research.

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